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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/570,930	03/08/2006	Dirk Auf Der Heide	03079K	3811
ProPat Klaus Schweitzer 425-C South Sharon Amity Road Charlotte, NC 28211			EXAMINER JACOBSON, MICHELE LYNN	
			ART UNIT 1782	PAPER NUMBER
			MAIL DATE 08/25/2011	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/570,930

## Applicant(s)

AUF DER HEIDE ET AL.

## Examiner

Michele L. Jacobson

## Art Unit

1782

**Period for Reply**  
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 5) ☒ Claim(s) 1-8, 12-15 and 18 is/are pending in the application.
- 5a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 6) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 7) ☒ Claim(s) 1-8, 12-15 and 18 is/are rejected.
- 8) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 9) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-C100)  
Paper No(s)/Mail Date \_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/3/11 has been entered.

***Examiner Notes***

2. Any objections and/or rejections made in the previous action, and not repeated below, are hereby withdrawn.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-8, 12-14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Erk et al. U.S. Patent No. 4,897,298 (hereafter referred to as Erk) and Beckwith et al. WO 97/36798 (hereafter referred to as Beckwith) with evidence provided by Stenger et al. U.S. Patent No. 5,399,427 (hereafter referred to as Stenger).

5. Erk teaches polyamide sausage casings containing at least one polyamide which can absorb at least 5% of their own weight in water prior to saturation that can be used for hot packed food stuffs or for those which are heated after packing. (Col. 1, lines 4-12, Col. 3, lines 5-10) A sausage casing that is treated with water prior to filling avoids the problems of the need for additional lubricating agent and provides a casing that can be filled to a constant diameter and that can be tied off and clipped without error and without any loss and so that the filled casings display no visible tightening folds. (Col. 2, line 65-Col. 3, line 2) It is particularly preferred that the casing of Erk consists of at least one of polyamide 6, polyamide 6,6, copolyamide 6/6,6 or a mixture of PA-6 and PA 6,6. (Col. 4, lines 46-50) The casings produced are recited to have thicknesses between 25 to 100  $\mu\text{m}$ . (Col. 5, lines 19-22) The casing of Erk may be seamless. (Claim 11) The

casing of Erk may also be multiaxially oriented and thermally fixed under controlled multiaxial shrinking. (Col. 5, lines 60-63)

6. The casing of Erk is preferably prepared by continuous water soaking of the inside of the casing with a bubble technique. (Col. 4, lines 21-24)

7. Erk is silent regarding including liquid smoke in the interior of the casing disclosed.

8. Beckwith teaches packaging films that can transfer a modifier to a food product in a cook-in process. (pg. 1, lines 6-10) Cook-in films are disclosed to preferably possess sufficient adherence to the food product within to inhibit or prevent "cook-out" during the cook-in process. Cook-out involves the collection of juices between the surface of the container food product and the food-contact surface of the packaging material. Preventing cook-out can increase product yield and provide a more aesthetically appealing packaged product. (Pg. 2, lines 7-12)

9. Beckwith also teaches that application of a modifier such a liquid smoke to the outer surface of a food product to impart smoke color, flavor and/or odor is often desirable. (Pg. 2, lines 13-19)

10. Beckwith teaches a film comprising copolymer segments that are substantially insoluble in water and other segments that are substantially hygroscopic. (Pg. 3, lines 27-30) The copolymer retains a modifier such that it can be transferred to a food product in contact with the food contact layer. (Pg. 3, line 30-Pg. 4, line 2) The film of Beckwith provides a desirable level of adhesion to the packaged product such that the film sufficiently adheres to the product during cook-in to prevent cook-out but is capable

of being torn away from the cooked food product without tearing away any of the food.

(Pg. 4, lines 26-29)

11. The hygroscopic portions of the copolymer disclosed by Beckwith are water sorbing or swellable so that when they come into contact with aqueous modifier solutions they are able to retain some of the modifier which can then be transferred to the food during cook-in or by contact with the film. (Pg. 8, lines 16-26)

12. The hygroscopic segments of the copolymer preferably have a water sorption capacity of greater than 5%. (Pg. 9, lines 30-31)

13. To assist in reducing or eliminating cook-out, a food contact layer having a surface energy of greater than 34 dynes/cm, preferably greater than 50 dynes/cm is preferred. At such surface energies, the food contact layer is believed to provide sufficient adhesion with the food product to prevent or substantially minimize cook out. (Pg. 13, lines 1-6) If adhesion to the food product is too low the surface energy of the food contact layer can be increased by subjecting the surface of the food contact layer to corona treatment or by including a polar additive such as polyamide. (Pg. 13, lines 7-21)

14. The modifier such as liquid smoke disclosed by Beckwith can be sorbed into the food contact layer after production of the film article. When the film article is a tube, the modifier can be contacted with the tube inner surface by slug coating and sorbed thereby. (pg. 14, lines 15-31)

15. Both Erk and Beckwith are directed towards water absorbing casing films for meat cook-in applications. Beckwith discloses that materials such as liquid smoke are

advantageously employed as coatings in the interiors of meat casings to impart smoke color, flavor and/or odor to the meat. Beckwith also discloses that liquid smoke can be applied to the interior of a film having a water sorption capacity of greater than 5% by slug coating of an aqueous solution comprising liquid smoke.

16. Regarding claims 1-4, 8, 13, 14 and 18: It would have been obvious to one having ordinary skill in the art at the time the invention was made to have employed liquid smoke as taught by Beckwith in the water solution used to prepare the polyamide 6 casing of Erk in order to impart smoke color, flavor and/or odor to the food packaged in the casing of Erk. This obvious improvement to the casing of Erk would have produced a casing having the same structure as claimed in claims 1, 13 and 18.

17. As evidenced by Erk, casings comprising Nylon 6 layers can absorb at least 5% of their own weight in water prior to saturation. This absorption of water is directly related to the swelling value of the food casing. Since the casing of Erk is made of the same materials as claimed by applicant, and as disclosed by Erk would have good water absorbing capabilities, the casing of Erk would inherently display a water swelling values as claimed in claims 1, 3 and 13. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)

18. The casing of Erk is disclosed to be 25 to 100  $\mu\text{m}$  which overlaps or encompasses the range of casing thicknesses claimed in claims 1 and 13. In the case

where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)

19. Erk is silent regarding the water vapor permeability of the casing, but since the casing of Erk is produced from the same materials disclosed by applicant and has a thickness which overlaps or encompasses the ranges of thickness disclosed to be useful by applicant it logically flows that the casing of Erk would have a water vapor permeability the same as claimed in claims 1, 4 and 13. Furthermore, as evidenced by Stenger, single layer polyamide casings consisting of nylon 6 having a thickness of 39-41  $\mu\text{m}$  and a water vapor permeability of 20  $\text{g/m}^2/\text{day}$ . (Table 1, comparative example 1) which is further evidence the casing of Erk, consisting of nylon 6, would have water vapor permeability as claimed in claims 1, 4 and 13.

20. Erk is silent regarding the surface energy of the food contact surface of the casing. However, Beckwith discloses that the surface energy of a food casing is preferably greater than 34 dynes/cm and discloses the utility of adding polyamide to the material comprising the food contact layer of a casing in order to achieve this value of surface energy. As such, one of ordinary skill can logically deduce that polyamide has a surface energy of greater than 34 dynes/cm or else it would not be capable of increasing the surface energy of the inner layer of a casing to this level. Furthermore, Beckwith discloses that the surface energy of a film may be increased by corona treatment of the film. It would have been obvious to one having ordinary skill in the art at the time the invention was made who desired greater adhesion of the casing of Erk to



the meat contained therein to have corona treated the interior surface of the casing of Erk in order to achieve a surface energy of greater than 34 dynes/cm to provide desirable characteristics of meat adhesion in order to prevent cook-out during the cooking process. This modification of Erk with Beckwith would have produced a corona treated casing as claimed in claim 8 with surface energies as claimed in claims 1, 2 and 13.

21. Therefore, the obvious modification of Erk according to the teachings of Beckwith to provide a casing capable of imparting smoke color, flavor and/or odor to the packaged contents would have produced the same invention as claimed in claims 1-4, 8, 13, 14 and 18.

22. Regarding claim 5: The casing of Erk is disclosed to be seamless.

23. Regarding claims 6 and 7: The casing of Erk is multiaxially stretched and heat set as claimed in claim 6. The examiner reasonably interprets the disclosure of "multiaxially" by Erk to include biaxially. Since the casing of Erk is formed of the same materials claimed by applicant and treated in the same fashion as claimed and disclosed by applicant it naturally flows that it would inherently display the properties of residual shrink claimed in claim 7.

24. Regarding claim 12: The casing of Erk is a cooked-meat sausage casing.

25. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Erk et al. U.S. Patent No. 4,897,298 (hereafter referred to as Erk) and Beckwith et al. WO 97/36798 (hereafter referred to as Beckwith) with evidence provided by Stenger et al. U.S. Patent No. 5,399,427 (hereafter referred to as Stenger) as applied to claim 1 above, and further in view of Chiu et al. U.S. Patent No. 4,377,187 (hereafter referred to as Chiu).
26. Erk and Beckwith teach what has been recited above but are silent regarding coating the interior surface of food casings with a liquid smoke solution containing carboxymethylcellulose.
27. Chui teaches peelability enhancing agents such as carboxymethylcellulose can be applied by slug coating and aqueous solution on the interior of sausage casings. (Col. 6, lines 2-33).
28. Both Erk and Chui are directed towards sausage casings. As evidenced by Beckwith, it was known in the art that too much adhesion of an encased food to a casing can lead to tearing off of the foodstuff during casing removal. Additionally, as evidenced by Beckwith, it was known in the art at the time the invention was made that polyamides have high surface energies and increase the adhesion of foodstuffs to the inside of casings. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have included carboxymethylcellulose in the aqueous solution disclosed by Erk for processing the polyamide 6 casing disclosed to control the peelability of the sausage casing which maintaining enough adhesion to prevent cook-out during the cook-in process. As such, the obvious modification of Erk

with Beckwith and Chui would have produced the same invention as claimed in claim 15. It is noted by the examiner that the recitation in claim 15 that the carboxymethylcellulose is an additive to set the viscosity of the liquid smoke is interpreted to be merely an intended use which would not provide any further structural limitations to an aqueous solution comprising liquid smoke and carboxymethylcellulose since no actual values of viscosity are recited.

### ***Response to Arguments***

29. Applicant's arguments with respect to claims 1-8, 12-15 and 18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michele L. Jacobson whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-6 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michele L Jacobson/  
Examiner, Art Unit 1782

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Art Unit 1782